

NEIGHBOURHOOD CHOICE AND NEIGHBOURHOOD SATISFACTION IN VIOLENCE-INDUCED SEGREGATED URBAN ENVIRONMENTS

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Abstract - A major resultant consequence of urban violence in multi-ethnic cities in recent time, is segregation along ethnic, religious or ethno-religious divides. Using the segregated Jos city of Nigeria as a case, this study examined the level of difference between neighbourhood satisfaction of residents whose central factor of neighbourhood choice is the restrictive force of violence-induced segregation and those of varying factors. The result of the tested hypothesis using independent sample t-test revealed that the strength of the difference in the mean neighbourhood satisfaction of the two groups, is very low; thereby implying that in violence-induced segregated urban environments, no significant difference existed between the neighbourhood satisfaction of the inhabitants who reside in their current neighbourhoods due to the compelling circumstance of segregation and those who freely chose theirs on the platform of non-segregation factors. The need then arises for the investigation of the predictors of neighbourhood satisfaction in this type of urban setting.

Keywords - Neighbourhood choice, neighbourhood satisfaction, violence-induced

I. INTRODUCTION

The neighbourhood of residence occupies a central place in urban dwellers' everyday life and the decision about the choice of this residential neighbourhood is a function of multiple factors. Studies have well reported that socio-demographic characteristics of households have a great influence on their choice of neighbourhoods (Zahid et al., 2015; Bergstrom et al., 2013). Meanwhile, freedom of choice has been identified as a major key player in neighbourhood satisfaction of residents independent of other factors surrounding the choice' decision (Hamersma et al., 2014; Bischoff and Reardon, 2013; Permentier, 2011). Such freedom appears not to be at total disposal of residents in violence-induced segregated urban environments. It is well noted in the literature that following the challenges of urban violence in Jos metropolis, ethno-religious alignment for purpose of safety became the sole central determinant of neighbourhood choice and dynamics of residential mobility (Aliyu et al, 2015; Krause, 2011). The development eventually resulted into the segregation of the city along ethno-religious lines. The difference in the neighbourhood satisfaction experienced by residents whose singular reason of choosing to reside in their current neighbourhoods is the restrictive force of the segregation factor and others who freely chose theirs in consideration of other reasons different from segregation, as disposed to by previous studies in other urban context, needs to be determined. In line with the findings of several studies (Bernardo and Palma-Oliveira, 2016; Rashid et al., 2013; Westaway, 2009; Chapman and Lombard, 2006), such residents who have identified with their neighbourhoods based

on such factors that are of interest to them are expected to derive higher satisfaction from their neighbourhoods than those who made choice out of restrictions.

This study therefore aims to investigate the magnitude of the difference in the level of neighbourhood satisfaction of these two groups.

II. THEORETICAL BACKGROUND

2.1 Violence-induced segregated urban environment and the study area

Cities are usually identified with multiple functions, thereby possessing forces of attraction from close and long ranges. This often synthesizes into the development of multi-cultural cities that are today found in different regions of the world. The socio-cultural mix in these urban hubs at times breed fragile relationships which culminate into violence-induced segregation. According to Bhavnani et al. (2014), recent reports of outbreak of violence across many of these multicultural cities in different parts of the globe is an open testimony to the fragility of the relationship among resident groups in the cities. De Vita et al. (2016, p. 320) also observed that modern cities are faced with the challenge of social conflict as a result of the presence of different groups divided by cultural, religious or ethnic issues. Hence, residents who hitherto share the same socio-cultural, physical and economic space in their neighbourhoods, move apart and reside in separate sections of the city; reducing the intensity of their social contact and extended benefits of multi-cultural interaction. Jos metropolis, the study area for this research, is situated in the Northern part of Nigeria. It developed into a highly cosmopolitan city due to centrality of its

location in the country (Figure 1) and rich deposit of tin which attracted citizens from different parts of the nation either as labourers or traders in the mining industry. (Dung-Gwom and Rikko, 2009). Its near temperate climate in a tropical region also played a significant role in its cosmopolitan growth since the colonial era. The metropolis was adjudged the most peaceful city in the northern zone due to a long period of peaceful co-existence among all ethnic and religious groups despite its complex cosmopolitan nature. It was however largely engulfed in incessant multiple urban crises starting from 2001 through 2011 (Higazi, 2011). This eventually resulted into neighbourhood segregation of the city along ethno-religious divides (Higazi, 2011; Krause, 2011; Magaji, 2008). Thus, a scenario of neighbourhoods that are homogeneously Muslims or Christians with few others retaining their old mixed nature, was created. Hence, residents who have shared the same socio-cultural and physical neighbourhood environment for over a century restructured into neighbourhood enclaves of perceived homogenous identity for safety purpose.

2.2 Determinant factors of neighbourhood choice and neighbourhood satisfaction

Residential mobility has for a long time been noted to hinge on two key decisions of whether to move and where to move to within the city (neighbourhood choice). Bergstrom et al. (2013) however observed that the role played by the neighbourhood factor in relation to the decision of where to move, is understudied and as such requires further investigation.

Neighbourhood choice is a complex decision that is dependent on multiple factors ranging from personal characteristics of the individuals to the physical and social attributes of the neighbourhood environment. One of such important factors is, dwelling availability since households can only move to places only if there are vacancies there (Bergstrom et al., 2013). People prefer associating with a natural and aesthetically appealing environment which therefore have influences on neighbourhood choice (Carmona et al., 2008). Studies such as Tapsuwan et al. (2018) found security as the most desirable factor to residents in Cambera, Australia and Rashid et al. (2013) similarly reported that security was the highest rated factor of neighbourhood choice in Iran.

In a study conducted in Northern Ireland using focus group technique, Zahid et al. (2015) identified residential environment, accessibility, neighbourhood facility, and cost as the four main factors that determine neighbourhood choice' decisions. There is however a near consensus in the literature that neighbourhood choice is influenced by a complex interrelationship of individual household socioeconomic characteristics and preference (Bergstrom et al., 2013).

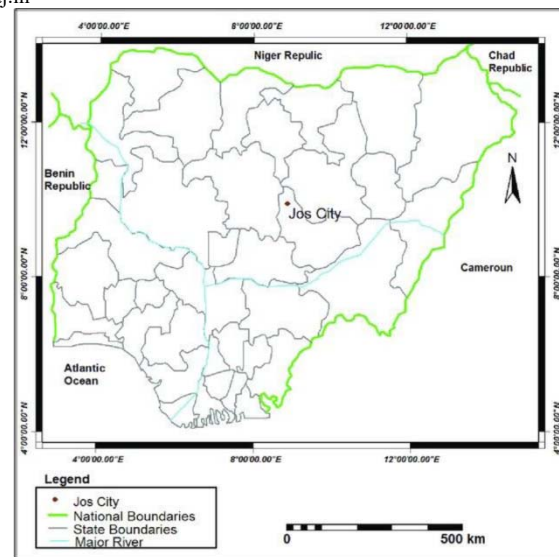


Figure 3.2: Locational centrality of Jos in Nigeria (Source: National Centre for Remote Sensing, Jos)

Consideration for demographic composition of a neighbourhood such as population homogeneity has also been noted to be highly instrumental to the decision of residential location choice (Sirgy, et al., 2005). Gou and Bhat (2006) for instance, reported that in the United States, households tend to locate in areas with a high proportion of other households with similar household structures and household sizes as their own. Studies have also indicated that social connection and status are considered equally important while deciding on the choice of neighbourhood. It was in relation to this that an earlier study by Winstanley et al. (2002) indicated that many people are unwilling to leave their familiar neighbourhoods due to neighbourhood attachment syndrome, most especially if they grow up in the area. Tatu (2010) while exploring the factors that urban residents consider when making residential location decisions in Tanzania, reported that such factors as social networks prevails in the decision making process. Results of probit model in a study conducted by Hedman (2013) in Sweden showed that the presence of family is indeed a strong determinant for neighbourhood choice. It is evident from the foregoing that the decision to choose a particular neighbourhood is dependent on several factors within the realm of environmental and social attributes of the neighbourhood as well as the provision of facilities and services. The choice therefore depends on individual household's interest, which is on the other hand restricted by such other factors as socioeconomic characteristics of the individual. This determinesthe capacity of affording the neighbourhood of interest and availability of houses in the neighbourhood may also prevail on the interest even when a person possesses the financial capacity to afford. Studies have equally established that a positive relationship exists between neighbourhood choice factors and neighbourhood satisfaction. In a

study conducted in Iran, Rashid et al. (2013) concluded that safety, availability of facilities and services and the social environment which were the factors that influenced the choice of neighbourhoods by the respondents, had significant positive correlations with the amount of satisfaction derived by residents in their sample consisting of both old and new neighbourhoods. It should however be noted that the applicability of these theories and empirical results to a large extent, assume an environment where choice is freely made. It is therefore not clear whether there is a difference between the level of neighbourhood satisfaction derived by residents who choose and reside in their neighbourhood on the basis of the choice factors discussed above and those who choose within a restrictive force of violence-induced segregated environment. Thus we hypothesize that:

Hypothesis

A significant difference does not exist between the mean neighbourhood satisfaction scores (MNSS) of residents whose neighbourhoods' choice are constrained by segregation factor and those whose choice are validly determined by freely considered factors in violence-induced segregated urban environment.

III. METHODOLOGY

This study is part of a larger study conducted in Jos metropolis between 2016 and 2018. Quantitative method was used in collecting and analysing data for the study. Proportional quota and systematic sampling techniques were employed to administer survey questionnaires on 480 household heads across the 18 wards identified in an earlier study by Krause (2011). Out of this, 454 were successfully retrieved but only 289 (63.7%) of these were valid for analysis. The remaining 165 (36.3%) were observed to be completed with lack of consciousness of its purpose for research in mind. However, the valid response rate is higher than the 52.7% average reported by Baruch and Holtom (2008) in their analysis of 490 different studies that collected their data through survey questionnaires. Other studies such as Ibem et al. (2017) also obtained about 60% questionnaire retrieval validity in their study on public housing. The questions analysed in this study was made up of two main parts. The first, a closed-ended question which elicit information from respondents regarding the reason for staying in their current neighbourhoods in the segregated city is the independent variable (IV) while the overall neighbourhood satisfaction which is measured on a Likert scale of 1-5: 1 = strongly not satisfied, 2 = not satisfied, 3 = neutral, 4 = satisfied and 5= strongly satisfied, is the dependent variable (DV). Independent sample T-test was employed to analyse the collected data for the study due to its ability to indicate whether the mean scores of two different groups is statistically significant or not. To determine whether a significant difference exist between the neighbourhood satisfaction of residents

who chose their current neighbourhoods on the basis of segregation and those of other factors, one categorical IV and one continuous DV were required to test our hypothesis. Respondents' responses to the overall neighbourhood satisfaction on a scale of 1-5 is the continuous variable. All other reasons provided by the respondents, apart from segregation, were collapsed into one, making a non-segregation factor, to obtain the categorical variable. The data was verified for some assumptions before conducting the T-test. The first one was the scale of measurement. T-test requires that the DV should be measured on a continuous scale. The overall neighbourhood satisfaction (DV) for the research which was measured on a 5-point Likert scale fulfils the assumption. The second is the assumption of random sampling which was equally fulfilled with the use of proportional quota and systematic method as earlier stated. T-test as a parametric statistic also assumes normality in the distribution of the population from which sample was drawn for the study. The result of the normality conducted on the variable shows a skewness and kurtosis of -0.085 and -1.168 respectively (Table 1). These are within the acceptable range of ± 2 (Coakes and Steed, 2007).

Table 1: Normality test for overall neighbourhood satisfaction

Overall		Statistics
N	Valid	282
	Missing	7
	Mean	3.09
	Skewness	-.085
	Std. Error of Skewness	.143
	Kurtosis	-1.166
	Std. Error of Kurtosis	.286
	Range	4
	Minimum	1
	Maximum	5

IV. RESULTS AND DISCUSSIONS

4.1 Respondents reasons for choice of neighbourhood

Respondents were required to indicate reasons for the choice of their current neighbourhood in the city. Six options were provided viz: (i) Current segregation status of the city (ii) Security factor (iii) Neighbourhood physical environment (iv) Neighbourhood social environment (v) Desirable public facilities and utilities (vi) Others. Those whose chose 'others' were required to state such reason or factor. Seven factors were identified through this means from 48 respondents who chose the option. These include inheritance, marriage, low rent, public transport, born in the neighbourhood, quietness of neighbourhood and social status. The percentage scores of the responses was determined as shown in Figure 1.

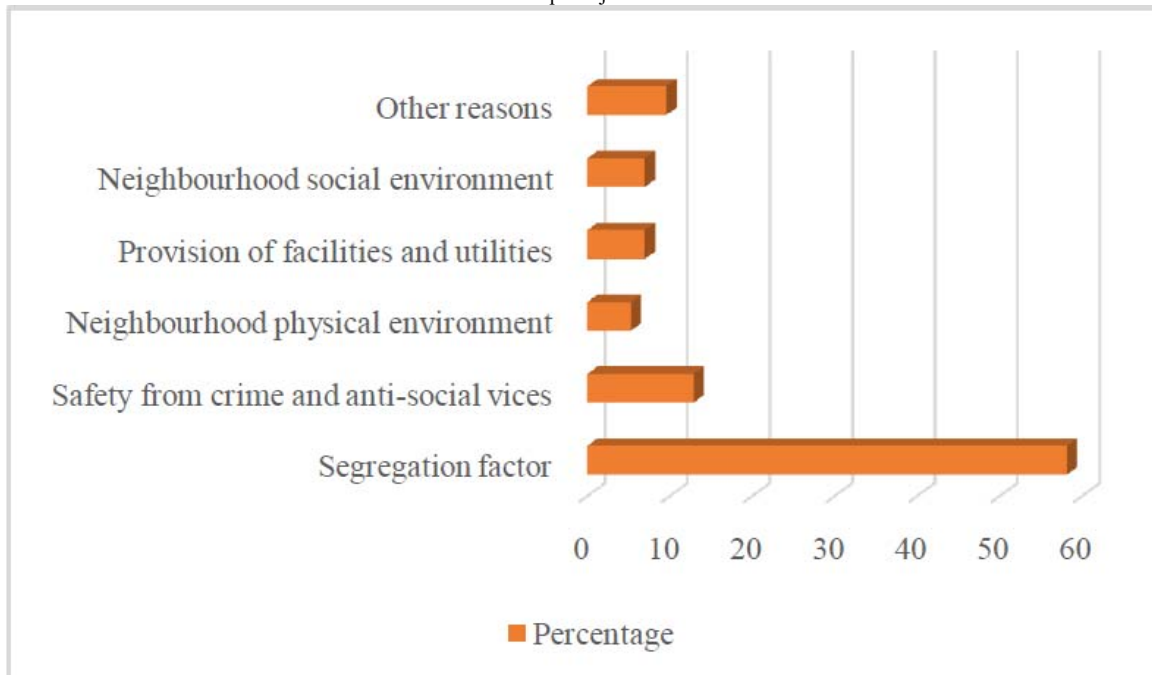


Figure 1: Respondents' reasons for staying in current neighbourhoods

Of 282 respondents to the question on the questionnaire, 167 (58.2%) indicated that the choice of their current neighbourhood was due to the prevailing segregation factor that the city is currently exposed to while 36 (12.8%) gave the reason of safety from crimes and other anti-social vices. Only 15 (5.3%) stated that their choice was a function of the state of the neighbourhood physical environment. Neighbourhood social environment and availability of facilities and utilities in the neighbourhood, each had 20 (7.0%) respondents who believed their choice were made on the considerations of these attributes. The remaining 27 (9.6%) made their choices of neighbourhood on the basis of the seven other factors earlier stated. This result indicate that consideration of segregation factors appears to have overshadowed any other factor of neighbourhood choice in the study area. The finding aligns with the previous reports that safety from inter-ethnoreligious violence became the sole factor of

neighbourhood choice due to the recurring ethno-religious crises (Aliyu et al., 2015; Gambo and Omirin, 2012; Krause, 2011; Dung-Gwom and Rikko, 2009).

4.2 Neighbourhood choice factors and level of neighbourhood satisfaction

Following the discovery in respect of the choice factors, we further examined whether a significant level of difference exist between the neighbourhood satisfaction of residents who chose their neighbourhood based on segregation and those of non-segregation factor.

Thus, the five other factors for choosing neighbourhood by residents, apart from segregation (Figure 1), were collapsed into one factor named non-segregation factor as shown in Figure 2. Outputs of the T-test from SPSS are contained in Table 2 and 3 below.

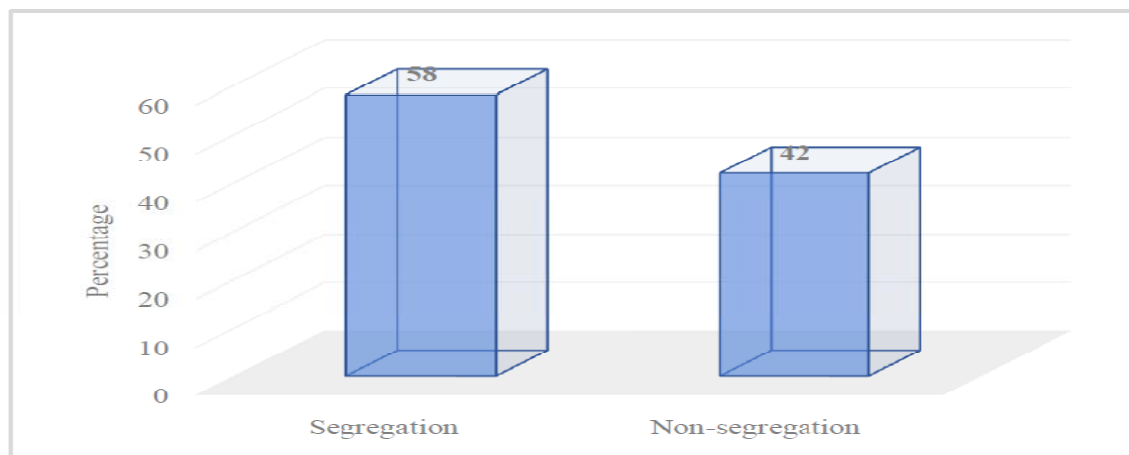


Figure 2: Segregation and non-segregation factors of neighbourhoods' choice

The output produced from the T-test statistics is as shown in Table 1 and 2.

Table 2: Group statistics (output from SPSS)

	Factor	N	Mean	Std. Deviation	Std. Error Mean
Overall satisfaction	Segregation	162	2.98	1.319	.104
	Non-segregation	120	3.11	1.275	.116

Table 3: Independent sample t-test output

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Overall satisfaction	Equal variances assumed	.027	.870	-.849	282	.396	-.133	.157	-.441	.175
	Equal variances not assumed			-.854	261.05	.394	-.133	.156	-.440	.174

The result of the independent sample T-test contained in Table 3 shows that there is not statistically significant difference in the mean overall neighbourhood satisfaction scores for the residents based on segregation and non-segregation factors. The null hypothesis is therefore accepted and the alternative rejected. The difference in scores for segregation factor (M = 2.98, SD = 1.32) and non-segregation factor (M = 3.11, SD = 1.28; $t(282) = -0.85 = p = 0.40$, two-tailed). The magnitude of the difference based on Cohen (1988) proposed guidelines as cited in Pallant (2011), (mean difference = -0.13, 95% CL: -0.44 to 0.18) was very small ($\eta^2 = 0.003$ or 0.3%). In other words, the strength of the difference in the mean neighbourhood satisfaction of the two groups (neighbourhood's choice based on segregation and non-segregation factors) is very small (0.3%). The result obtained in this test implies that there is no significant difference between the MNSS of residents who chose their neighbourhood on the basis of segregation and those who freely chose or reside in their neighbourhoods for reasons other than the prevailing segregation circumstance in the city. Residents who freely chose their neighbourhoods on the platform of all other factors would ordinarily be expected to show a higher level of neighbourhood satisfaction compared to those who chose theirs due to the compelling factor of segregation. This result from violence-induced segregated urban environment therefore represents a unique situation that seems not to agree with the studies carried out in other environmental contexts (Bischoff and Reardon, 2013; Hamersma et al., 2014) where residents who choose their neighbourhoods freely on the basis of its perceived attributes were reported to experience higher level of neighbourhood satisfaction.

IMPLICATION OF FINDINGS AND CONCLUSION

The results obtained in this study though appear unexpected, shows that apart from choice based on

unconditional freedom, inhabitants can derive as much satisfaction from their neighbourhoods as other inhabitants who have made free choice if the compelling factor is considered important by them. Since the residents in this category chose their neighbourhoods for a purpose of residing in areas where they have the feeling of safety from violence, they exhibit no significant difference in the level of neighbourhood satisfaction compared with others who were not compelled by segregation. Considering the residents' experience of incessant crisis in the study area, it is not surprising that 58% of the residents show no significant degree of difference in the neighbourhood satisfaction they derive, compared with the other residents, despite not having complete freedom to make choice of their neighbourhood of interest based on the various factors that previous researches have reported to influence neighbourhood choice and their correlations with neighbourhood satisfaction. However, this study has opened a window for further studies in this direction. It will be important to examine the degree of and the factors that both predict and can improve neighbourhood satisfaction in this type of environment. This becomes necessary because, the fact that they exhibit low rate of difference with residents that were believed to have freely made choice of their neighbourhoods in the segregated city, does not imply they are maximally satisfied living in such environments. Our finding in a way appears to agree with the previous studies which submit that safety was more important to residents than any other factor.

The angle of difference may however be the fact that safety in the study area is more of protection against ethnoreligious violence rather than crimes. It can therefore be inferred from this result that, the same policy framework and planning design strategies and programmes can be employed for enhancement of neighbourhood satisfaction of residents in violence-induced segregated cities irrespective of the factors that influence their choice of neighbourhoods.

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